AMENDMENTS TO THE CLAIMS

Please replace all prior versions, and listings, of claims in the application with the following list of claims, in which insertions are indicated by underlining and deletions are indicated by strikeouts or double bracketing.

1. (Currently Amended) A method of inhibiting prostate cancer cell growth, comprising inhibiting Stat5b polypeptide activity in the prostate cancer cells, wherein Stat5b activity is inhibited by contacting the prostate cancer cells with an siRNA inhibitor of Stat5b activity.

2.-3. (Canceled)

4. (Withdrawn) The method of claim 3, wherein the inhibitor of Stat5 activity is a nucleic acid, which encodes a protein that has dominant-negative Stat5 function.

5. (Withdrawn) The method of claim 4, wherein the protein encoded is selected from the group consisting of: mutated Stat5a and mutated Stat5b.

6. (Withdrawn) The method of claim 5, wherein the mutated Stat5a is Stat5aΔ713.

7. (Withdrawn) The method of claim 3, wherein the agent that inhibits Stat5 activity is an antisense construct.

8.-10. (Canceled)

11. (Currently Amended) The method of claim [[3]] 1, wherein the siRNA ~~construct~~ inhibits the expression of [[a]] the Stat5b polypeptide.

12. (Canceled)

13. (Currently Amended) The method of claim [8]] 1, wherein the siRNA ~~construct~~ comprises Stat5b nucleic acid.

14. (Canceled)

15. (Withdrawn) The method of claim 2, wherein the inhibitor of Stat5 inhibits one or more Stat5 kinases.

16. (Withdrawn) The method of claim 15, wherein the Stat5 kinase is selected from the group consisting of: Jak1, Jak2, Jak3, Tyk2, Src, Fyn, Yes, Lck, Hck, Blk, Fgr, and Lyn.

17. (Withdrawn) The method of claim 15, wherein the inhibitor of Stat5 activity is a small molecule.

18. (Withdrawn) The method of claim 2, wherein the inhibitor of Stat5 activity is a nucleic acid, which encodes a protein that has dominant negative Jak2 function.

19. (Withdrawn) The method of claim 2, wherein the inhibitor of Stat5 activity inhibits prolactin.

20. (Withdrawn) The method of claim 19, wherein prolactin is inhibited by an antibody to a prolactin receptor.

21. (Currently Amended) The method of claim [[2]] 1, wherein the ~~inhibitor~~ inhibition of Stat5b activity in the prostate cancer cells results in prostate cancer cell death.

22-24. (Canceled)

25. (Withdrawn) A method of diagnosing or aiding in the diagnosis of prostate cancer in a male, comprising: (a) obtaining a sample of prostate tissue from a male; and (b) determining whether activated Stat5 is present in cells of the prostate tissue sample, wherein the presence of activated Stat5 is an indication of prostate cancer in the male.

26. (Withdrawn) The method of claim 25, wherein the prostate cancer is primary prostate cancer, advanced prostate cancer, or metastatic prostate cancer.

27. (Currently Amended) A method of treating prostate cancer in a male, comprising administering to a male in need of such treatment ~~thereof~~ a therapeutically effective amount of an ~~agent~~ siRNA that inhibits the activity of Stat5b polypeptide in prostate cancer cells~~, wherein the activity of Stat5 is inhibited in prostate cancer cells~~ of the male.

28. (Currently Amended) The method of claim 27, wherein the prostate cancer is ~~primary prostate cancer, advanced prostate cancer, or~~ metastatic prostate cancer.

29. (Canceled)

30. (Withdrawn) The method of claim 27, wherein the inhibitor of Stat5 is a nucleic acid that encodes a protein that has dominant-negative Stat5 function.

31. (Withdrawn) The method of claim 30, wherein the protein encoded is selected from the group consisting of: mutated Stat5a and mutated Stat5b.

32. (Withdrawn) The method of claim 31, wherein the mutated Stat5a is Stat5aΔ713.

33. (Withdrawn) The method of claim 27, wherein the agent that inhibits Stat5 activity is an antisense construct.

34-36. (Canceled)

37. (Currently Amended) The method of claim [[34]] 27, wherein the siRNA ~~construct~~ inhibits the expression of a Stat5b polypeptide.

38. (Canceled)

39. (Currently Amended) The method of claim [[34]] 27, wherein the siRNA ~~construct~~ comprises Stat5b nucleic acid.

40. (Canceled)

41. (Withdrawn) The method of claim 27, wherein Stat5 activity is reduced through the inhibition of one or more Stat5 kinases.

42. (Withdrawn) The method of claim 41, wherein the Stat5 kinase is selected from the group consisting of: Jak1, Jak2, Jak3, Tyk2, Src, Fyn, Yes, Lck, Hck, Blk, Fgr, and Lyn.

43. (Withdrawn) The method of claim 41, wherein the inhibitor of one or more Stat5 kinases is a small molecule.

44. (Withdrawn) The method of claim 27, wherein the inhibitor of Stat5 is a nucleic acid, which encodes a protein that has dominant negative Jak2 function.

45. (Withdrawn) The method of claim 27, wherein Stat5 activity is reduced through inhibition of prolactin.

46. (Withdrawn) The method of claim 45, wherein prolactin is inhibited by an antibody to a prolactin receptor.

47. (Currently Amended) The method of claim 27, wherein inhibition of the activity of Stat5b in prostate cancer cells of the male results in prostate cancer cell death.

48. (Withdrawn) The method of claim 25, wherein the presence of activated Stat5 in (b) is detected by a method selected from the group consisting of: immunohistochemistry, immunocytochemistry and DNA-binding assays.

49. (Withdrawn) The method of claim 25, wherein the activated Stat5 in (b) is nuclear Stat5.

50. (Withdrawn) A method for identifying an agent that inhibits Stat5 activity in prostate cancer cells, comprising: (a) contacting a prostate cancer cell or tissue sample comprising prostate cancer cells with a candidate agent; and (b) determining the effect of the agent in (a) on the Stat5 activity wherein if Stat5 activity determined in (b) is less than Stat5 activity in an appropriate control sample, an inhibitor of Stat5 activity is identified.

51. (Withdrawn) A diagnostic method for predicting responsiveness to Stat5 inhibition therapy for treatment of prostate cancer, comprising: (a) obtaining a sample of prostate tissue from a male in need of treatment for prostate cancer, and (b) determining whether activated Stat5 is present in cells in the prostate tissue sample, wherein if the presence of activated Stat5 is determined, it is predictive of responsiveness to Stat5 inhibition therapy for treatment of prostate cancer.

52. (Withdrawn) The method of claim 51, wherein the prostate cancer is primary prostate cancer, advanced prostate cancer, or metastatic prostate cancer.

53. (Currently Amended) A pharmaceutical composition comprising an siRNA inhibitor of Stat5b activity.